GEN.
CXC-3786
Cy 2 of 3 LMSC SATELLITE

18 September 1962

Dear Peter

We have now completed our studies on use of the A-12 as a satellite launcher. Over the past several months I have shown you some of the preliminary studies which are now finalized in the two attached reports. You will notice certain inconsistencies in the two reports due to the security problem between our ADP group working on the airplane and the LMSC group working on the satellite section. These discrepancies are quite minor, covering such things as follow.

In SP 2-374 there are these errors:

(1) Page 4 states that the take-off of the aircraft satellite combination would be made from the Hawaiian Islands. I did not tell LMSC that our base is located elsewhere.

(2) Page 7 states that a launching of 30 to 45° would be used for the satellite. This was later changed in the Addendum of the report, wherein 0 to 15° is used as the basis for competition.

(3) Page 7 also states that a length restriction of 30 feet was set for the booster-satellite. As you know, we later increased this by 5 to 6 feet.

Some of these comments are repeated several places. Specifically, on pages 40 and 59, but they have no bearing on the over-all accuracy of the report.

You will note in report SP-404 that we addressed our attention only to the configuration C satellite-booster combination, which makes use of a Polaris A-3 booster and other gear as described in the report. I did not feel it desirable at this time, to consider the development of a completely new booster system - for this reason. The payload that we launch into the single orbit mission is quite high, in the region of 900 to 1,000 lbs., and the shear size and bulk of the polaris attached to the A-12 necessitates two refuelings to get to the launch area. The launching problem of this booster-satellite combination from the A-12 poses some fairly substantial problems, particularly in check-out, which must be done by the second man provided in the A-12. There is also the problem of stabilizing the booster after launch so that it does not assume a nose-down attitude prior to firing.

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My over-all feeling in regard to this project is that it is marginally feasible from a technical point of view. One might consider construction of a specially designed aerodynamically stable booster payload combination, carrying about 1/2 the present payload, but this would involve very substantial costs and a much longer time period.

By submission of these two reports, I consider that we have completed the study for the $25,000, which you authorized. We will be happy to have STATINTL [redacted] visit you in Washington to present a formal briefing on the subject of these reports, should you desire.

Sincerely,

Kelly

attach. (3 copies SP-404
3 copies SP 2-374)